

DOCKET FILE COPY ORIGINAL



**Building The
Wireless Future™**

CTIA

Cellular
Telecommunications
Industry Association
1250 Connecticut
Avenue, N.W.
Suite 200
Washington, D.C. 20036
202-785-0081 Telephone
202-785-0721 Fax

February 10, 1995

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W. - Room 222
Washington, D.C. 20554

RE: Ex Parte Letter - Docket No. 92-115
Part 22 Rules Governing Public Mobile Services

RECEIVED

FEB 10 1995

Dear Mr. Caton:

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

On Friday, February 10, 1994, Michael F. Altschul, Vice President and General Counsel, Cellular Telecommunications Industry Association (CTIA), sent the attached letter and attachment to William F. Caton, Acting Secretary, Federal Communications Commission.

Pursuant to Section 1.1206 of the Commission's Rules, an original and one copy of this letter and the attachment are being filed with your office.

If there are any questions in this regard, please contact the undersigned.

Sincerely,


Robert F. Roche

Attachment

No. of Copies rec'd
List ABCDE





**Building The
Wireless FutureTM**

CTIA

Cellular
Telecommunications
Industry Association
1250 Connecticut
Avenue, N.W.
Suite 200
Washington, D.C. 20036
202-785-0081 Telephone
202-785-0721 Fax
202-736-3248 Direct Dial

Michael F. Altschul
Vice President,
General Counsel

February 10, 1995

William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, NW -- Room 222
Washington, DC 20554

Ex Parte Communication: CC Docket No. 92-115

RECEIVED

FEB 10 1995

Dear Mr. Caton:

Because of the importance CTIA attaches to its obligation to comply with the Commission's rules, I writing to respond to the serious charges raised by C-Two-Plus Technology, Inc., in its February 2, 1995 Reply in this docket. C-Two-Plus alleges that CTIA violated Section 1.1206(a)(2) of the FCC's rules by failing to file *ex parte* notifications in this docket following a meeting and exchange of correspondence in the fall of 1992. As described below, these claims are baseless.

As the attached documents (originally attached as Exhibit B to the C-Two-Plus Reply) clearly demonstrate, CTIA contacted Commission staff in October and November of 1992 seeking enforcement of Section 22.915 of the Commission's rules, the pre-existing ESN ("Electronic Serial Number") security rule for cellular telephones. See, November 4, 1992 letter from Michael Altschul to Renee Licht, Acting General Counsel, FCC ("... I urge you to act promptly to enforce Section 22.915 of the FCC's rules for cellular service.").

Not only were CTIA's contacts with the Commission properly directed towards obtaining enforcement of the existing Part 22 rule, it is clear that the Commission staff understood CTIA's intent and correctly treated CTIA's request not as a comment relating to the above-referenced rulemaking proceeding, but rather as a request for the



Commission's concurrence that it is a violation of Section 22.915 for an individual or company to alter or copy the ESN of a cellular telephone, or for an individual to operate a cellular telephone that contains an altered or copied ESN. See, undated Facsimile Transmission Sheet from Dan Abeyta to Julius Knapp (refers to CTIA's Nov. 6 letter "seeking Commission concurrence that any alteration of a cellular telephone's ESN violates Section 22.915 of the rules"); see also, January 15, 1993 letter from John Cimko to Michael Altschul ("[y]ou ask for Commission concurrence that cellular phones containing [modified ESNs] ... do not conform with Part 22 rules").

As footnote 108 of the *Report and Order* notes, the ESN security provisions of old Section 22.915 of the Rules have been renumbered and are now continued in the new Rules as Section 22.933. In addition, for at least the third time since 1991, the Commission repeated its conclusion that cellular telephones "with altered ESNs" do not comply with this section of the Commission's rules. See, *Report and Order*, at ¶ 62; January 15, 1993 letter from John Cimko to Michael Altschul; October 2, 1991 Public Notice, Report No. CL-92-3.

Given that the relevant portion of Section 22.915 was just renumbered, not rewritten, in this docket, it is difficult to comprehend the basis of the C-Two-Plus claims. While I have no intent to reargue the merits of the substantive issues raised by C-Two-Plus, the seriousness of their allegations concerning CTIA's compliance with the Commission's *ex parte* rules warrants this brief response.

Respectfully Submitted,

A handwritten signature in black ink, which appears to read "Michael Altschul". The signature is fluid and cursive, with the first name "Michael" and last name "Altschul" clearly distinguishable.

Michael Altschul

Enclosures

cc: Timothy J. Fitzgibbon
Thomas F. Bardo
Carter, Ledyard & Milburn
Attorneys for C-Two-Plus Technology

Exhibit B

October 15, 1992

Mr. Julius Knapp
Authorization and
Evaluation Division
Office of Engineering
and Technology
Federal Communications Commission
Washington, D.C. 20554

Re: October 22 Meeting to Discuss ESN Security

Dear Mr. Knapp:

I am writing to confirm our meeting to discuss ESN security issues, to be held at 10:00 AM on October 22, 1992 at CTIA's office, 1133 21st Street, N.W., Washington, D.C. In particular, the "Cell Phone Emulator" manufactured by C 2 Plus Technology presents a potential threat to the cellular industry by facilitating the cloning of cellular ESNs on a scale heretofore not possible. In addition, we wish to underscore the importance of insuring the integrity of cellular ESNs, and review the FCC's type acceptance requirements for cellular mobile units. In that regard, I have enclosed a letter from Ms. Mary Anderson to Mr. Frank Coperich concerning YAESU portable phones.

Common Carrier Bureau personnel have been invited to join you, Mr. Coperich and Mr. Art Wall. CTIA's Eric Hill, Director of Industry Security, and Martin Nierwienski, Manager - Technical Support, will conduct the meeting.

If you would like any additional information in advance of Thursday's meeting, please give me or Eric Hill a call at (202) 785-0081.

Sincerely,

Michael Altschul
Michael Altschul

Enclosure

cc: Mr. Steve Markendorff



November 4, 1992

Ms. Renee Licht
Acting General Counsel
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION
AUTHORIZATION & EVALUATION DIV

NOV 6 1992

COLUMBIA, MD

Dear Ms. Licht:

On October 22, 1992, CTIA and the staff of the FCC's Mobile Services Division and the Office of Engineering and Technology met to discuss the applicability of the FCC's rules to the NAM Emulation Programming Device ("NEPD") manufactured and distributed by C Two Plus Technology. At that meeting, CTIA and the Commission staff reviewed the FCC's rules, and Mr. Eric Hill, CTIA's Director of Industry Security demonstrated to the Commission staff that the NEPD alters a cellular phone's factory-set Electronic Serial Number.

As you can see from the attached letter to C Two Plus, CTIA has concluded that the alteration of a cellular phone's ESN by the C Two Plus NEPD is a clear violation of Section 22.915 of the FCC's rules. Based on our demonstration and our review of the device, CTIA seeks the FCC's written concurrence that cellular phones containing ESNs that have been modified by the NEPD (and similar devices) do not conform to the Part 22 Rules.

Given the importance of this matter to the cellular industry's ability to combat fraud, I urge you to act promptly to enforce Section 22.915 of the FCC's rules for cellular service.

Sincerely,

Michael Altschul
Michael Altschul

Vice President and
General Counsel

Enclosures

cc: CTIA Fraud Task Force Funding Carriers
✓ Mr. Julius Knapp, Authorization and
Evaluation Division, FCC
Mr. John Cimko, Chief, Mobile Services
Division, FCC

Cellular Telecommunications Industry Association

1133 21st St. N.W., Third Floor, Washington, D.C. 20036 • (202) 785-0081 • FAX (202) 785-0721



recycled paper

November 3, 1992

Mr. Stuart F. Graydon
President
C Two Plus Technology
3174 Mobile Highway
Montgomery, AL 36108

Dear Mr. Graydon:

I am writing to thank you for your cooperation with CTIA's Fraud Task Force, and to report on CTIA's findings concerning the C Two Plus Technology NAM Emulation Programming Device ("NEPD"). As you know, our interest in the NEPD directly relates to the ease with which cellular phones with altered Electronic Serial Numbers ("ESN's") can be used to defraud cellular carriers. This is because cellular carriers cannot distinguish between a phone with a factory-set ESN and programmable Mobile Identification Number ("MIN") and a "cloned" (or "emulated") phone with the same ESN and MIN combination. The cellular industry estimates that its losses due to all types of fraud now exceed \$300 million per year.

Based on CTIA's review,¹ including your statement to Eric Hill, CTIA's Director of Industry Security, that the NEPD overwrites the manufacturer's original ESN, it is clear that the C Two Plus NEPD alters a cellular phone's electronic serial number from the unique ESN installed by the manufacturer. It follows, therefore, that a cellular phone with an ESN that has been modified by the NEPD does not comply with Section 22.915 of the Federal Communications Commission's rules, and you should be aware that any individual or company operating such phones or performing such alterations could be subject to appropriate enforcement action.

The requirement that each cellular mobile unit must contain a unique ESN is enshrined in Section 22.915 of the FCC's rules for

¹CTIA studied the NEPD using the device you provided. We thoroughly reviewed your instructions and followed the procedures specified by C Two Plus to install any manufacturer's ESN into a second phone. I have enclosed a summary of the procedures we followed to install (or "clone") an ESN from an NEC phone into an Audiovox phone.

cellular service.² On October 2, 1991, the FCC unambiguously stated that "[p]hones with altered ESNs do not comply with the Commission's rules and any individual or company operating such phones or performing such alterations is in violation of Section 22.915 of the Commission's rules and could be subject to appropriate enforcement action."³ The FCC established its rules governing ESNs because the requirement that each cellular phone contain a unique ESN is critical to the cellular industry's ability to render accurate bills and control fraud.

There is a direct connection between the enforcement of Section 22.915 of the FCC's rules and the industry's ability to provide high quality service to cellular customers. The cellular infrastructure requires that each phone contain a unique ESN; as a corollary, the cellular industry cannot accommodate two (or more) phones with the same ESN. All current and future technical standards used to interconnect cellular systems to provide "roaming" service to customers rely upon the uniqueness of each mobile unit's ESN. Shared ESNs disrupt billing mechanisms and circumvent fraud detection programs.

Because CTIA considers the alteration of a cellular phone's ESN performed by the C Two Plus NEPD to be a clear violation of Section 22.915 of the FCC's rules, we are sending copies of this letter to our member companies and communicating our findings to the appropriate officials at the Federal Communications Commission. Because the NEPD and C Two Plus's marketing of the device⁴ has the potential to undermine the very basis of cellular security and disrupt the industry's efforts to combat fraud, we are urging the FCC to act promptly to enforce its rules.

²In 1983, the Technical Standards Branch of the FCC's Office of Science and Technology issued the "Cellular System Mobile Station-Land Compatibility Specification" in OST Bulletin No. 54. Paragraph 2.3.2 specifies that "[t]he serial number is a 32-bit binary number that uniquely identifies a mobile station to any cellular system. It must be factory-set and not readily alterable in the field." As the enclosed FCC public notice explains, the specifications set forth in paragraph 2.3.2 of OST Bulletin No. 53 are incorporated into Section 22.915 of the Commission's rules. See October 2, 1991 Public Notice, "Changing Electronic Serial Numbers on Cellular Phones Is a Violation of the Commission's Rules", (FCC Report No. CL-92-3).

³Id.

⁴The enclosed C Two Plus marketing brochure, "Quick Reference Taken From FCC Rules and Regulations," is false and misleading. It asks "Is CELL TWO PLUS Emulation Illegal?" and then states "The CELL TWO PLUS feature is not specifically mentioned in the FCC Rules as this technology was not developed at that time..." As I have noted, Section 22.915 of the Commission's rules affirmatively prohibits ESN cloning.

CTIA does appreciate your cooperation, and I invite you to discuss our findings with me or Mr. Hill. Now that our review of the NEPD is complete, CTIA is returning under separate cover the equipment you provided.

Sincerely,


Michael Altschul

Vice President and
General Counsel

Enclosures

cc: CTIA Fraud Task Force Funding Carriers
Ms. Renee Licht, Acting General Counsel, FCC
✓ Mr. Julius Knapp, Authorization and
Evaluation Division, FCC
Mr. John Cimko, Chief, Mobile Services
Division, FCC

Summary of C-Two-Plus Instructions

1. Data obtained from C Two Plus must be programmed into the phone. In the case of the Audiovox CMT-420 phone, the data is programmed into the first four "System ID Inhibit" locations. The data consists of four numbers, each with five digits. C Two Plus generates these numbers from two customer-provided ESNs: the factory set original ("primary") ESN associated with the phone and the secondary ("cloned") ESN associated with a different phone.
2. The phone's factory-installed firmware chip must be removed.
3. A chip provided by C Two Plus must be placed in the NEPD, and the NEPD must be connected to the phone by inserting a cable into the same location from where the manufacturer's original firmware was removed.
4. After powering the phone for twenty seconds, then powering off, the NEPD is removed from the phone, and the manufacturer's original firmware chip is re-inserted into its original location.
5. If the programming procedure is done correctly, the mobile unit displays error message "01". If no error message appears, then the procedure was done incorrectly and must be repeated.

QUICK REFERENCE TAKEN FROM FCC RULES AND REGULATIONS:

Q. CAN I TALK BETWEEN MY MOBILE PHONES? NO! This would be considered a 'Party Line or Fleet-Call' situation which is prohibited under FCC Rules.

If both phones are on at the same time and one tries to call out, the first one pressing the SEND key grabs the line and locks the other one(s) out. If both are on and a call comes in, the tower equipment cannot handle multiple answers on one line and you may lose the call.

FCC

[Page 22672] 6. SERVICES: 103. The final decision in Docket No. 18262 imposed NO RESTRICTIONS on cellular system provision of dispatch services, EXCEPT FOR FLEET-CALL DISPATCH. We concluded that if cellular systems could, through natural economics, provide lower-priced dispatch services, THE PUBLIC SHOULD NOT BE DENIED THAT BENEFIT.

[Page 27679] 22.911 PERMISSIBLE COMMUNICATIONS (a) Mobile Stations in this service are authorized to communicate WITH AND THROUGH BASE STATIONS ONLY. (d) General and dispatch communications are permitted on cellular systems. Pending further investigation by the Commission, "fleet call" dispatching, in which a dispatcher SIMULTANEOUSLY COMMUNICATES with multiple mobile units, WILL NOT BE PERMITTED except on a developmental basis.

[Page 22672] 118. [PARTY LINE/FLEET COMMUNICATIONS PROHIBITED] (2) because the mobile units would each require a separate voice channel, while a conventional system could operate over single channel.

Q. IS CELL TWO PLUS EMULATION ILLEGAL? The CELL TWO PLUS feature is not specifically mentioned in the FCC Rules as this technology was not developed at that time, however, REGULATORY STRUCTURE anticipates State Of The Art improvements:

FCC

[Page 27671] We are establishing a regulatory structure under which a cellular system operator, once authorized, will have considerable freedom to adapt its system to growing or changing demand. FLEXIBILITY TO ADAPT TO CHANGE IS INHERENT IN THE CELLULAR CONCEPT AND AN APPROACH REQUIRING ANY MORE PAPERWORK OR PRIOR APPROVAL THAN IS ABSOLUTELY ESSENTIAL MIGHT DESTROY THAT FLEXIBILITY. Accordingly, once a cellular service area has been established, the system operator will be able to modify its system without substantial oversight, as long as it serves the same area.

[Page 27666] 56. A cellular system operator is a common carrier and not merely a customer; interconnection arrangements should therefore BE REASONABLY DESIGNED SO AS TO MINIMIZE UNNECESSARY DUPLICATION OF switching facilities and the ASSOCIATED COSTS TO THE ULTIMATE CONSUMER.

[Page 22672] 103. We (FCC) concluded that if cellular systems could, through natural economics, provide lower-priced dispatch services, THE PUBLIC SHOULD NOT BE DENIED THAT BENEFIT.

[Page 22672] D. CONCLUSION 112. CELLULAR SYSTEMS SHOULD BE CAPABLE OF ADAPTING TO CHANGING CUSTOMER DEMANDS AND ADVANCING TECHNOLOGY. Licensees in this service WILL HAVE THE RESPONSIBILITY to ADAPT to the CHANGING MARKET ENVIRONMENT.

I, #3

FEDERAL COMMUNICATIONS COMMISSION

Common Carrier Bureau

Mobile Services Division

----- o -----

Facsimile Transmission Cover Sheet

Room 644, 1919 M Street NW, Washington, DC 20554
Telephone: voice (202) 632-6450 fax (202) 634-7845

Date: -----

To: Julius Knapp -----

Fax #: (301) 344-2050 -----

Contact #: -----

From: Dan Abeyta -----

Total pages • 4 ----- including this cover sheet

Message/Special Instructions: -----

Attached letter responds to CTIA's November 6, 1992 letter
to Renee Licht seeking Commission concurrence that any alteration
of a cellular telephones ESN violates Section 22.915 of the Rules.
Please review. -----



I, #4

ohn

page 1

From jcjccb
From: jcjccb@ccbmsd.UUCP (John Cimko)
X-Mailer: Altos UNIX System V Mail (version 3.2)
To: ccbmsd!jmtccb
Date:
Status: R

FEDDS MESSAGE BEGINS HERE >>>

Sender: ccbmsd!jcjccb : John C.
Date:
Subject: Cellular Phone ESNs
CC: mcpccb slmccb Primary: jmtccb
RR: y

Jim:

Mike Altschul tells me that he sent a letter over here after the briefing we attended on the ESN tampering problem, asking the Commission to express its views on the legality of this tampering. He says the letter was referred to OGC, but they inform him they have "tasked" the letter over to MSD for a response.

Mike is anxious to get a response that says that, as a general matter, any ESN alteration runs afoul of our rules (we have already said something like this in public notices).

John C.

I, #5

COMMON CARRIER BUREAU
ROUTE SLIP

TO:

___ CHERYL TRITT
___ JILL ROSS MELTZER
☒ GERALD VAUGHAN
___ KATHIE LEVITZ
___ WENDELL HARRIS
___ JIM SPURLOCK
___ TOM SPAVINS
___ TOM BEERS
___ GERI MATISE
___ ELLE MULCARE
___ JOE HALL

___ JAMES KEEGAN
___ GREG WEISS
___ GREG VOGT
___ KEN MORAN
___ GEORGE LI
___ JIM SCHLICHTING
___ JOHN CIMKO
___ PEYTON WYNNIS

	Action		Coordination		Per Conversation
<input checked="" type="checkbox"/>	Approval		File		Prepare Reply
	As Requested		For Correction		See Me
	Circulate		For Your Information		Signature
	Comment	<input checked="" type="checkbox"/>	Note and Return		

REMARKS

CTIA has requested the attached letter
from the Division

The letter is similar to a
recent Public Notice, also attached.
Please let me know if you are OK
on this

Thank

John

FROM JOHN CIMKO

DATE _____

CC 64
MAY 1992

660

FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

January 15, 1993

In Reply Refer To:
1600D-JMT

Cellular Telecommunications Industry Association
1133 21st St., N.W., Third Floor
Washington, D.C. 20036

Attn: Michael Altschul

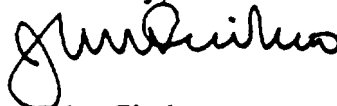
Dear Mr. Altschul:

This is in response to your letter of November 4, 1992 concerning the applicability of the FCC's rules to the NAM Emulation Programming Device (NEPD) manufactured and distributed by C Two Plus Technology. You ask for Commission concurrence that cellular phones containing Electronic Serial Numbers (ESNs) that have been modified by the NEPD (and similar devices) do not conform with Part 22 rules.

In our Public Notice of October 2, 1991, Report No. CL-92-3, we stated our general position that "phones with altered ESNs do not comply with the Commission's rules...." We also stated that "any individual or company operating such phones or performing such alterations is in violation of Section 22.915 of the Commission's rules and could be subject to appropriate enforcement action." Section 22.915, entitled Cellular system compatibility specifications, generally sets forth the standards of cellular operation as reflected in the Cellular System Mobile Station-Land Station Compatibility Specification (April 1981 ed.), Office of Engineering and Technology Bulletin No. 53. The bulletin is contained in Appendix D to the Report and Order in CC Docket No. 79-318, 86 FCC 2d 469, 567 (1981).

It is a violation of Section 22.915 of the Commission's Rules for an individual or company to alter or copy the ESN of a cellular telephone so that the telephone emulates the ESN of any other cellular telephone. Moreover, it is a violation of the Commission's Rules to operate a cellular telephone that contains an altered or copied ESN.

Sincerely,



John Cimko
Chief, Mobile Services Division
Common Carrier Bureau